

## **Butterflies of the Laramie Mountains, Wyoming (Lepidoptera: Rhopalocera)**

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**Abstract.** The Laramie Mountains, which occupy the southeastern corner of Wyoming, are the northern and easternmost outliers of Colorado's Front Range. Faunally related to the Colorado Rockies, the Laramies represent a blend zone with northern and northeastern faunas. One hundred forty five (145) species of butterflies representing 9 families have been recorded from the Laramies. These are presented with collecting locations, flight periods, and annotations with regard to the Laramie Mountains. The data for the species list were compiled primarily from the authors' own field work between 1963 and 1987, with additional data supplied by other collectors.

**KEY WORDS:** Lepidoptera, Rhopalocera, faunal list, checklist, biodiversity

### **INTRODUCTION**

Little has been published on the butterflies of the Laramie Mountains of SE Wyoming. In his 1956 checklist on SE Wyoming butterflies, deFoliart included Sybille Canyon and Pole Mountain. Others have treated SE Wyoming more generally (Klots 1930, Nabokov 1953, Ferris 1970, 1971a, 1971b) but specific coverage of the Laramie Mountains has been limited or absent. Further data can be gleaned from a careful examination of Johnson (1971), Howe (1975), Ferris & Brown (1981) and Scott (1986), but as yet there has been no full treatment of this area.

The Laramie Mountains are located in southeastern Wyoming, forming a gentle arc from the Colorado border between Cheyenne and Laramie on the south end to Casper Mountain on the north, and lie within Laramie, Albany, Converse, and Natrona Counties. They are considered a direct extension of the familiar Front Range of Colorado (Blackstone, 1971) and represent the easternmost portion of the Rocky Mountain system in Wyoming. With the exception of a few streams between Laramie and Cheyenne that drain into the South Platte River (e.g. Lone Tree Creek, Dale Creek, Deadman Creek), all other streams of the Laramie Mountains empty into the North Platte River. The North Platte River enters Wyoming from Colorado, circles the Laramies on the west and north and then departs eastward into Nebraska (see insert, Figure 1). From north to south, the major east slope drainages are: Deer Cr., Boxelder Cr., LaPrele Cr., LaBonte Cr., Horseshoe Cr., the

Laramie River, and Sybille Cr. The Laramie River has its origin SW of the city of Laramie and is the only stream to penetrate the Laramies from the west slope to the east. The west slopes are drained by numerous small streams, most of which eventually join the Medicine Bow River, the major west-slope drainage. The major highway is Interstate 25, which enters south of Cheyenne from Colorado, parallels the Laramie Mountains until joining the North Platte River, which it then follows to Casper. State and County roads leave I-25 to enter the Laramie Mountains along most of the east slope drainages, and usually bear the names of the drainage streams. Roads from the east slope converge on the west slope in the Shirley Basin on their way to Medicine Bow and Laramie.

The Laramie Mountains consist of a series of Precambrian Sherman granite monadnocks rising above a broad erosion surface (Marshall & Colbert 1965; Dunbar 1960, fig. 308) that form extensive unwooded parks whose surfaces are generally at about 2135 m above sea level. The high peaks of the range, which are much lower than those commonly associated with the Rocky Mountains, rise abruptly above the surrounding peneplain to altitudes between 2440 m and 2895 m above sea level, with the single exception of Laramie Peak (3132 m). The granitic soils were formed from the erosion of the surrounding monadnocks and have an effective depth of less than 30 cm.

Three principal Life Zones are represented in the Laramies: Upper Sonoran, Transition and Canadian (*sensu* Carpenter, 1956). Cary (1917) indicated that the Hudsonian Zone occurs on Laramie Peak but there is nothing distinctive about either the flora or fauna on the top of this peak. For further discussion of the Life Zones of this area, see Porter (1962) as well as Cary (op. cit.). On the E and NE slopes of the Laramies the prairie/mountain transition is very gentle at the south end (between Cheyenne and Laramie) and much more abrupt and broken farther north (Blackstone 1971). The altitude of the map area (Figure 1) ranges from about 1370 m along the North Platte River to 3132 m at the top of Laramie Peak. On the western slopes the total relief is much less, as the floors of the three intermontane basins that border the Laramies on this side (Shirley, Hanna and Laramie) rarely drop below 2135 m. An extensive high plain (2135-2400 m) and semi-desert extends from the Laramie Mountains SW as far as the Shirley Mountains. The Laramie Basin separates the Laramie Mountains from the Medicine Bow Mountains to the S and W, and its floor is above 2135 m except for a few depressions and blowouts (e.g., Cooper Lake, 2130 m).

The Laramie Mountains are bisected by the Laramie River, which cuts a canyon through the mountains roughly due west of Wheatland, and then continues its generally eastward course to join the North Platte River near the town of Fort Laramie (Figure 1). This bisection is ancient, formed by the ancestral Laramie River as it eroded through overlying sediments and the underlying basement rock (Dunbar, 1960). The division marks the southern end of the continuous boreal coniferous forest in the Laramies, and separates the range into two parts whose butterfly faunae which, while having

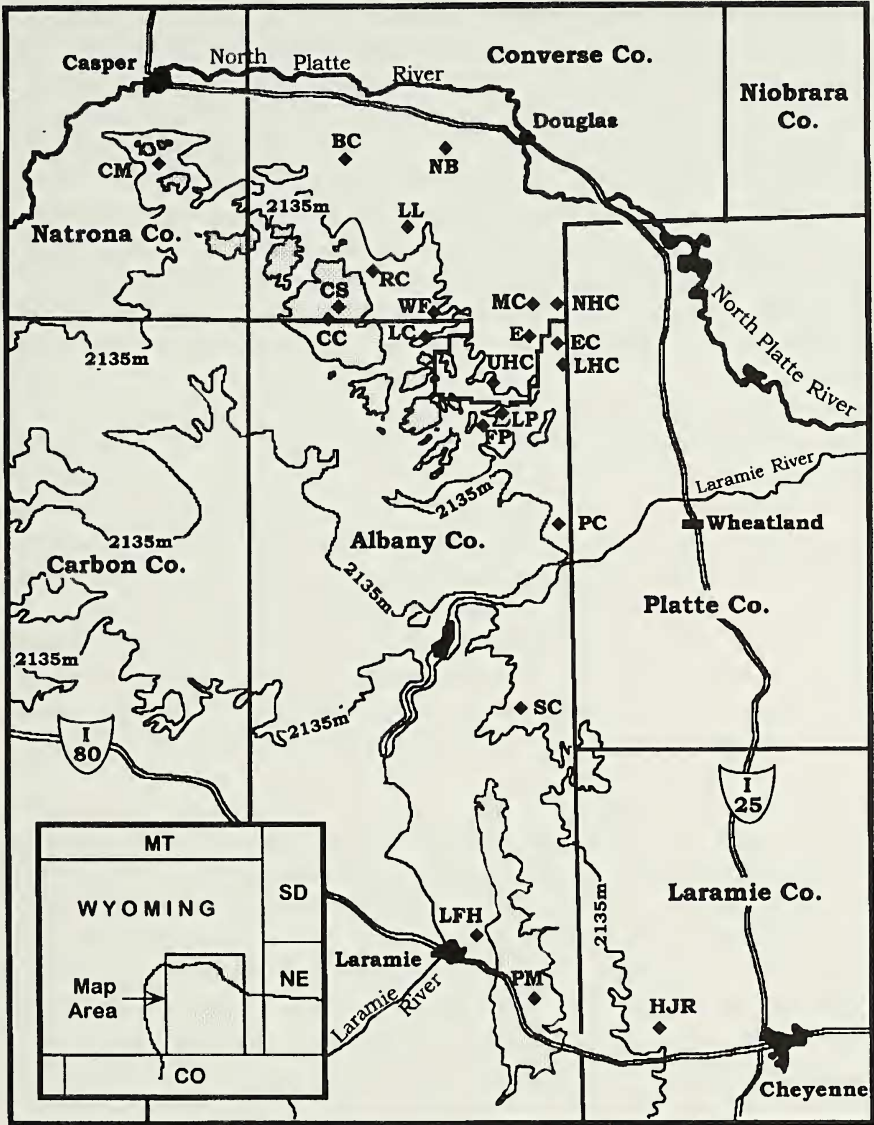


Fig. 1 The insert in the lower left shows the map area with respect to the state boundaries of Wyoming, Colorado, Nebraska, South Dakota and Montana, and shows the North Platte River as it enters from Colorado, circles around the Laramie Mountains and exits to the east into Nebraska. The two major highways (I-25 and I-80) are shown as parallel lines. The Platte River and the Laramie River are indicated. Contours are shown for 2135 m (7000 ft) and 2440 m (8000 ft). Land area above 2440 m is highlighted in gray. The major collecting localities are shown with two or three letter codes, corresponding to the text and Table 1.



many species in common, contain elements that are unique to each. As it cuts through the Laramie Mountains, the altitude of the Laramie River falls below 2135 m. Besides bisecting the mountain range on the basis of altitude, it widely separates the parts of the Laramie Mountains over 2440 m (Figure 1). Precipitation in the Laramie Mountains amounts to an average of 30-45 mm/year, but can vary widely at any given locality [e.g., 19.9 mm in 1954 and 55.6 mm in 1957 at Palmer Canyon]. The period from April to early July accounts for nearly half of the annual precipitation. Two units of the Medicine Bow National Forest are located in the Laramies and consist of a literal patchwork of federally and privately owned land. Local ranchers lease a great deal of federal land for use as summer pastureage. Recreation is also an important land use.

The butterfly fauna of the Laramies is most closely related to that of the Colorado Rockies, but its position as a northern and eastern outlying range creates a blend zone for many species that exhibit clines connecting the more southern forms with relatives to the north or northeast [e.g., *Colias alexandra* W. H. Edwards, *Euphydryas anicia bernadetta* Leussler, *Oeneis uhlerii* (Reakirt), *Basilarchia weidemeyerii* W. H. Edwards, etc.]. The fauna of the part of the Laramie Mountains south of the Laramie River contains some species endemic to the main Rocky Mountain massif [e.g., *Clossiana frigga sagata* (Barnes & McDunnough), *Pieris napi* (Linnaeus)] and some plains elements [*Euphilotes rita coloradensis* (Mattoni), *Yvretta rhesus* (W. H. Edwards)] which are absent or, at best, uncommon in the fauna of the northern segment.

### COLLECTING LOCALITIES

Major collecting sites are identified below. The format has been adapted from that of Holland (1984): Location (Abbreviated Letter Code): [Life Zones; Elevation]. The Life Zone codes are: U = Upper Sonoran Zone, T = Transition Zone, and C = Canadian Zone. In the list below and on the map (Figure 1), we have listed all major localities at which collecting occurred. However, for summary purposes we have combined some of the collecting localities (Table 1) since some of them are close to one another. In the list below, the codes for the collecting localities that are reported in Table 1 are in bold. When localities have been combined in Table 1, we follow the code for the combination with the individual localities within {curly brackets}. Unusual locations are mentioned individually in the checklist.

Natrona County: Casper Mountain: **(CM)** [T, C; 2135-2440].

Converse County: Douglas: **(D)** [U, T; 1495]. Ayre's Natural Bridge: **(NB)** [U, T, 1700]. Boxelder Canyon: BC [T; 2010]. **RC**: {Rabbit Creek: [T; 2165]. LL: Little LaPrele Creek near Virden Hill: [T; 1890]}. **CS**: {Cold Springs: [C; 2345]. CC: Campbell Creek Campground: [C; 2375]}. **LC**: {LaBonte Canyon: [T, C; 2165]. WF: West Fork of LaBonte Creek: [T, C; 2225]}. **E**: {Esterbrook [T; 1950]. MC: Mill Creek: [T; 1700]. NHC: North Horseshoe Creek: [T; 1830]}. **UHC**: (Upper) Horseshoe Creek [T; 1890]. Since most collecting done at the locations combined under UHC were in Albany Co. it appears in Albany Co. in the Table. Campbell Creek was formerly known as "Camel



Creek”; the U.S. Forest Service changed the name in the mid-70’s. There are two creeks called “Roaring Fork”: one is a tributary of Horseshoe Creek in Albany Co.; the other is a tributary of LaPrele Creek in Converse Co.). There are also two creeks named “North Horseshoe Creek”. The one to which we refer is near Esterbrook.

Albany County: **EC**: Esterbrook Campground: [T; 1830] (included with Esterbrook above). **LHC**: (Lower) Horseshoe Creek: [T; 1830] (included with Esterbrook above). **EP**: Eagle Peak: [T; 2315]. **FP**: Friend Park: [T, C; 2590]. **LP**: Laramie Peak [C; 2590-3050] (the records of EP, FP, and LP have been included with Upper Horseshoe Creek above. **PC**: Palmer Canyon [T; 1830]. **SC**: Sybille Canyon [T, U; 2070]. **PM**: Pole Mountain [T; 2500]. **LFH**: Foothills east of Laramie [T; 2225+].

Laramie County: **HJR**: Happy Jack Road, West of Cheyenne (HJR plus a number indicating miles from Cheyenne: 20HJR, etc.) [T; 1950+].

### PARTIAL CHECKLIST, WITH ANNOTATIONS

Figure 1 shows the location of the major collecting localities, as well as the elevation contours for 2135 m (7000 ft) and 2440 m (8000 ft). Table 1 provides a list of species collected in the Laramie Mountains, organized by major collecting localities in the four counties, with an indication of relative abundance and flight period. In the partial checklist below, which is organized in the same order as Table 1, we provide *limited* observations about *selected* species to supplement the information in Table 1. The data presented are based primarily upon the field work of the authors from 1963 to 1987. Additional data is as follows: Laramie County - Paul Opler (1984-1986, PAO); Laramie and most Pole Mountain records - Clifford D. Ferris (CDF); Palmer Canyon - F. Martin Brown; Casper Mountain - Dr. Karolis Bagdonas & students (from 1986 Season’s Summary, BFC). Unconfirmed records from deFoliart (1956) are noted by (deF). Past Season’s Summaries (SS) were also searched for pertinent data. The nomenclature follows Miller & Brown (1981) and Ferris (1989). However, the actual nomenclature used reflects the personal opinions of the authors. Certain species treatments represent a compromise between opposing views and do not in any sense indicate a definitive statement by us.

### Hesperiidae

*Thorybes mexicana nevada* Scudder. Rare. One record: PM, 21.VI.77 (CDF).

*Erynnis icelus* (Scudder & Burgess). Found only in the mountains.

*Erynnis afranius* (Lintner). Recorded only from CM (BFC) and PM (CDF).

*Erynnis persius fredericki* Freeman. Very common in the Transition and Canadian Zones. *E. lucilius* (Scudder & Burgess) apparently doesn’t occur in the Laramies.

*Pyrgus scriptura* (Boisduval). Two records from the plains at the fringes of the Laramies: D and Glendo (Platte Co.), leg. Ghulan N. Hasan.

*Piruna pirus* (W. H. Edwards). Reported only from near Cheyenne: 24HJR, 22.VI.85 and 13.VII.85, and Cheyenne, 22.VI.85 (all PAO).

*Yvretta rhesus* (W. H. Edwards). Not common, recorded only by CDF.

*Hesperia comma ochracea* Lindsey. Based on the treatment in Ferris & Brown (1981),

all forms of this species in the Laramies (formerly referred to under a variety of names, e.g., *manitoba*, *colorado*, *harpalus* etc.) are here placed under the name *ochracea*.

*Hesperia pahaska* (Leussler). Recorded only recently.

*Atalopedes campestris campestris* (Boisduval). One record: D, 28.VI.64.

*Atrytone logan lagus* (W. H. Edwards). Few specimens: D, 16.VII.64. Also: Glenrock, Converse Co., 7.VII.73 and 28.VII.75 (CDF).

*Ochlodes snowi* (W. H. Edwards). One record: 24HJR, 13.VII.85 (PAO).

*Atrytonopsis hianna* (Scudder). One record: E. of Yellow Pine Campground, Albany Co., 21.VII.86 (J. Nordin/CDF 1986 SS).

*Amblyscirtes oslari* (Skinner). One record SC: 9.VII.78 (CDF).

## Papilionidae

*Papilio polyxenes asterius* Stoll. In addition to the records shown, Ferris has sighted several specimens of what may be *polyxenes* in the Laramie-Pole Mountain area. It has also been sighted on Casper Mountain. It should occur along the North Platte River. SC, 14.VI.52 (deF), CM (BCF).

*Papilio bairdii* W. H. Edwards. Two records for form "*brucei*": NH, 23.VII.66 & EC, 24.VII.64. Reported from SC (deF). The typical black form has been recorded to the east (3.5HJR, 13.VII.85, PAO) and to the west (Jelm Mountain, CDF) but not as yet from the Laramie Mountains proper.

*Papilio zelicaon nitra* W. H. Edwards. The yellow, normal form ("*gothica*") is fairly common, rarely in numbers. Males hilltop. The rare black form ("*nitra*") has been recorded four times.

*Papilio indra indra* Reakirt. Widely distributed, never numerous. Males hilltop.

*Pterourus rutulus rutulus* (Lucas). This and the next species are the most common swallowtails.

*Pterourus multicaudatus* (Kirby). Specimens from low altitudes are larger, sometimes twice as large as those from higher altitudes. We have found and reared *P. multicaudatus* on Green Ash (*Fraxinus pennsylvanica* Marshall var. *subintegerrima* (Vahl) Fernald, Oleaceae).

*Pterourus eurymedon* (Lucas). Exceedingly scarce compared to how common it is in the Medicine Bow Range west of Laramie. NH, 5.VII.67, and CM.

## Pieridae

*Pontia protodice* (Boisduval & LeConte) and *Pontia occidentalis occidentalis* (Reakirt).

These species are sympatric in some localities and intergrades often occur. Generally, *P. protodice* is more common at lower altitudes, while *P. occidentalis* predominates at higher elevations. Seem to be continuously brooded.

*Pieris napi macdunnoughi* (Remington). More common by far in the southern end of the range (Pole Mountain). In the north, we have records only for CC, 30.VII.66 and CM (BCF).

*Euchloe olympia* (W. H. Edwards). Never common, even when found.

*Anthocharis sara julia* W. H. Edwards. Oddly distributed; despite extensive collecting we have never collected it in the central part of the Laramies, although it has been reported at both CM and HJR.

*Colias alexandra alexandra* W. H. Edwards. Most specimens are typical, but some of the plains populations and one near Esterbrook show varying degrees of orange flush. Few, if any, show evidence of hybridization with *C. eurytheme*. Most colonies show a small percentage of the female form "*alba*".

*Colias scudderii* Reakirt. Most records are from the headwaters region of LaPrele Cr. *Phoebis sennae eubule* (Linnaeus). One record: Laramie, 18.VI.83, K. Bagdonas (1983 SS).

*Eurema mexicanum* (Boisduval). A migrant species. Two records: D, 10.VII.63 and PM, 30.VI.75 (CDF).

*Eurema nicippe* (Cramer). A migrant species. Two records: D, 17.VI.63, 1.VIII.63.

*Nathalis iole* Boisduval. A frequent visitor to the Laramies.

## Lycaenidae

*Lycaena cuprea artemisia* Scott. Never common, our combined captures over 20 years amount to less than three dozen specimens.

*Gaeides xanthoides dione* (Scudder). Scott (1980) considered this species and *G. editha* (Mead) to be conspecific and noted that although they occur in the same counties in Wyoming and Montana, they never occur together at the same locality because of altitudinal separation. While this is generally true in the Laramies, at LaBonte Canyon they are sympatric and synchronous. Scott (op. cit.) further suggests that *G. xanthoides dione* may be a distinct species in its own right. The situation in LaBonte Canyon may indicate that this interpretation is correct.

*Chalceria rubida sirius* (W. H. Edwards). Some specimens from the eastern fringes of the study area show some blending with *C. r. longi* (Johnson) (Johnson & Balogh, 1977). More widely distributed than indicated.

*Hylolycaena hyllus* (Cramer). One record: D, 20.VI.87.

*Harkenclenus titus* (Fabricius) ssp. The majority of specimens seem to be somewhat atypical *H. titus titus*, but the Mill Creek colony shows a trend towards *H. t. watsoni* (Barnes & Benj.) (F. M. Brown, personal communication). Uncommon.

*Satyrium fuliginosum semiluna* (Klots). Some specimens approach the typical subspecies in facies.

*Satyrium sylvinus* (Boisduval). A male from CS was determined as *sylvinus* by H. K. Clench. Unfortunately, it was destroyed enroute back to the authors. Fisher has referred several specimens from LaBonte Canyon to this species (personal communication).

*Satyrium liparops aliparops* (Michener & dos Passos). Eight specimens to date. D, MC, and Beaver Cr. near. Alex Cross Ranch, Converse Co.

*Satyrium saepium saepium* (Boisduval). Form "*provo*" predominates. Nectars avidly on Yarrow [*Achillea millefolium* var. *lanulosa* (Nuttall), Asteraceae].

*Callophrys apama homoperplexa* Barnes & Benjamin. It is uncommon and sporadic in our area.

*Callophrys affinis affinis* (W. H. Edwards). Scott (1986) considers this and the above species to be conspecific. Specimens of *C. apama* from near Laramie exhibit a cline between *C. affinis* and *C. apama* (CDF, personal communication). One record: PM, 21.VI.77 (CDF).

*Callophrys sheridanii sheridanii* (W. H. Edwards). One of our earliest emerging species. Can be found while there is still snow on the ground.

*Incisalia augustinus iroides* (Boisduval). Never common, usually taken as singletons.

*Incisalia mossii schryveri* Cross. Most common in the vicinity of Pole Mountain, less so in the northern portion of the Laramies (two records).

*Incisalia polia obscura* Ferris & Fisher. Only from Pole Mountain, where it is common.

*Hemiargus isola alce* (W. H. Edwards). A migrant, but does produce a local brood before fall frosts set in. Very rare.



*Everes amyntula* ssp. (Boisduval). Much of our material exhibits a trend towards ssp. *valeriae* Clench.

*Celastrina argiolus* ssp. (Boisduval). One of the earlier appearing species in the area. *Euphilotes enoptes ancilla* (Barnes & McDunnough). Not common and local, associated primarily with canyon bottoms in the foothills.

*Euphilotes rita coloradensis* (Mattoni). Found in the foothills just east of Laramie.

*Icaricia shasta minnehaha* (Scudder). Most frequently encountered in Sybille Canyon. It has also been found in the hills and breaks east of Douglas.

## Riodinidae

*Apodemia mormo* (C. & R. Felder) ssp. Although our populations have been referred to ssp. *mejicanus* (Behr) (Scott, 1986), others refer to them as nearest ssp. *mormo* in facies (Fisher, in Ferris & Brown, 1981, and Ferris, personal communication). Scarce. Easily taken nectaring at *Eriogonum umbellatum* Torr. (Polygonaceae).

## Libytheidae

*Libytheana bachmanii* (Kirtland) ssp. A migratory species. One record (PM, 2.VII.75, CDF). The specimen is too battered to accurately determine ssp.

## Nymphalidae

*Euptoieta claudia* (Cramer). Never common, but widespread. A migrant.

GENUS *Speyeria* Scudder. Ten species of this genus are represented in the fauna of the Laramies. Seven of the ten are widely distributed and common. The other three, [*S. hydaspe* (Boisduval), *S. cybele* (Fabricius) and *S. aphrodite* (Fabricius)] are less common and more restricted in their distributions. As is usual with members of this genus, they are highly variable. We have therefore elected to forego ssp. treatment except when such designation is reasonably clear cut.

*S. cybele leto* (Behr). Never common, widely distributed in the proper habitat.

*S. aphrodite* (Fabricius). The majority are of the *ethne* (Hemming) phenotype.

*S. edwardsii* (Reakirt). Cannot generally be confused with other *Speyeria*, except for an occasional greenish *S. coronis* (Behr).

*S. coronis* (Behr). Mostly of the *halcyone* (W. H. Edwards) phenotype, with occasional examples of *snyderi* (Skinner).

*S. zerene* (Boisduval). This and *S. coronis* are often confused with one another in this area. Best characterized as *garrettii* (Gunder) with intrusions of *sinope* dos Passos & Grey.

*S. callippe* (Boisduval). Often characterized as ssp. *meadii* (W. H. Edwards), these populations show greater affinity towards the more northern and western phenotypes, such as *gallatini* (McDunnough).

*S. egleis* (Behr). Usually characterized as *macdunnoughi* (Gunder), in reality it is very variable and several other phenotypes can be found with great frequency.

*S. atlantis* (W. H. Edwards). Silvered, unsilvered and occasional partially silvered forms are sympatric in many localities in the Laramies. The degree of silvering of the under hindwing increases with altitude (A. Moeck, personal communication). In the Cold Springs area it is primarily silvered, with an occasional example of the "Appalachian" phenotype. The two typical forms are *hesperis* and *electa* (Ferris, 1983).

*S. hydaspe sakuntala* (Skinner). Generally quite constant in facies. The only *Speyeria* not recorded from the southern Laramies

*S. mormonia eurynome* (W. H. Edwards). Form "*clio*" is found in any long series from any locality.

*Clossiana frigga sagata* (Barnes & Benjamin). A colony of this species exists on Pole Mountain. It has a very short flight period (31.V to 9.VI) and may have become extinct (CDF).

*Poladryas arachne arachne* (W. H. Edwards). Generally uncommon.

*Charidryas acastus acastus* (W. H. Edwards). Two records: D, 9.VI.69 and PM, 11.VI.74 (CDF).

*Phyciodes tharos* (Drury). Common & widespread. All specimens examined from the mountains have been of the "B" phenotype (= *pascoensis*), although form "*marcia*" ("A" phenotype?) occurs on the plains east of Douglas in June.

*Phyciodes pallida barnesi* Skinner. Uncommon.

*Euphydryas anicia bernadetta* Leussler. Widespread; very common where found. Known foodplants are *Besseyia wyomingensis* (A. Nels.) Rydberg and *Symphoricarpos occidentalis* (Hook.) [both Scrophulariaceae] (Spomer, 1985 and Spomer & Reiser, 1985). It ranges westward from the type locality (Monroe Canyon, Sioux Co., Nebr.) into Wyoming along the Pine Ridge/Hat Creek Breaks to Douglas, throughout the Laramies and outlying foothills and southward into Colorado. Very variable, and at the southern end of its range begins to intergrade into the northern Colorado ssp., *E. a. eurytion* (Mead).

*Euphydryas editha alebarki* Ferris. Often sympatric with *E. anicia* and seems to emerge a bit ahead of it. More common at the southern end of the Laramies (Sherman Range) than in the north.

*Polygonia satyrus satyrus* (W. H. Edwards). Typically polymorphic.

*Polygonia faunus hylas* (W. H. Edwards). Uncommon.

*Polygonia zephyrus* (W. H. Edwards). The most common of our *Polygonia*. Brown phenotypes commonly occur.

*Polygonia progné* (Cramer). Two specimens (CS, 23.VI.63 and RC, 28.VII.64) were identified as this species by C. F. dos Passos in 1964 and confirmed by C. D. Ferris in 1984. These records were reported in the 1984 SS. It is also known from Crook County in NE Wyoming and from the Pine Ridge area of western Nebraska. It would appear that the northern Laramies represent the extreme western edge of its distribution in the area.

*Vanessa annabella* (Field). One record: D, *ex larva* on *Althea rosea* Cav. (Malvaceae), emerged 10.VIII.70.

*Vanessa atalanta rubria* (Fruhstorfer). Common and widespread at lower elevations, less so in the mountains.

*Limnitis archippus archippus* (Cramer). Apparently restricted to the North Platte River valley in the northern end of the range, but might occur up some of the tributary creeks.

*Basilarchia weidemeyerii weidemeyerii* W. H. Edwards. The Laramies are in a broad blend zone, where the typical ssp. *weidemeyerii* meets *B. w. oberfoelli* Brown (Perkins & Perkins, 1967). This is most noticeable in the females.

## Satyridae

*Coenonympha tullia ochracea* W. H. Edwards. Common and widely distributed. Very variable.

*Neominois ridingsii ridingsii* (W. H. Edwards). Prefers grassy areas, local, common when found. Two broods: (1st) late June to early July, (2nd) Aug.

*Oeneis chryxus chryxus* (Doubleday & Hewitson). Common. Biennially brooded; flies

in even years. The "cold" form is the predominate phenotype. The illustration of this form in Ferris & Brown, 1981, is in error. The specimen shown is a very dark *O. uhleri* (Reakirt).

*Oeneis uhlerii uhlerii* (Reakirt). Often sympatric with *O. chryxus*. Populations in the Laramies are quite variable (Brown, 1953). The dark phenotype (f. "*obscura*") occurs occasionally.

*Oeneis jutta reducta* McDunnough. Rare; associated with Ponderosa Pine forest. Biennially brooded, flies in even years.

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Table 1. Collecting Localities and Flight Periods of Butterflies in the Laramie Mountains. Table 1 lists all species that have been collected in the Laramie Mountains, organized by family. Selected collecting localities, organized by county, are identified by code (CM = Casper Mountain, D = Douglas, CS = Cold Springs & vicinity, RC = Rabbit Creek & vicinity, NB = Ayre's Natural Bridge, LC = LaBonte Canyon & vicinity, E = Esterbrook & vicinity, UHC = Upper Horseshoe Creek & vicinity, SC = Sybille Canyon, LFM = Laramie foothills, PM = Pole Mountain, HJR = Happy Jack Road). Three symbols are used to identify relative abundance: • = common; o = likely to be encountered; x = unlikely to be encountered. The flight period for each species is presented as a beginning and ending date: Month.Quarter-Month.Quarter, where the roman numeral refers to the month and an arabic numeral refers to the quarter of the month.

Collecting Locality →	County →													
	Natrona	Converse	Albany	Laramie	Flight Period								Laramie	Flight Period
	CM	D	CS	RC	NB	LC	E	UHC	SC	LFH	PM		HJR	
<b>Hesperiidae</b>														
<i>Epargyreus clarus</i> (Cramer)														VI.4-VII.1
<i>Thorybes pylades</i> (Scudder)		o												VI.1-VII.1
<i>T. mexicanus nevada</i> Scudder			o											VI.3
<i>Erynnis icelus</i> (Scudder & Burgess)											x			V.4-VII.1
<i>E. afraninus</i> (Lintner)	o													VI.1-VI.4
<i>E. persius fredericki</i> Freeman	•		•	•	•	•	•				•			VI.1-VII.4
<i>Pygus ruralis</i> (Boisduval)	o		•	•	•	•					o			V.3-VII.1
<i>P. scriptura</i> (Boisduval)		x												VII.2-VII.3
<i>P. communis</i> (Grote)	•	•	•		•		•		•	•	•		•	V.2-IX.1
<i>Pholisora catullus</i> (Fabricius)		•							o	o				VI.1-4; VIII.1-4
<i>Piruna pirus</i> (W. H. Edwards)													x	VI.3-VII.2
<i>Oarisma garita</i> (Reakirt)		•		•	•	•	•		•	•	•			VI.3-VII.4
<i>Yvretta rhesus</i> (W. H. Edwards)										x				VI.
<i>Hesperia uncas uncas</i> W. H. Edwards		o								o			o	VI.4-VII.2
<i>H. juba</i> (Scudder)		o								o				V.4-VI.3; IX.
<i>H. comma ochracea</i> Lindsey		•		•	•	•	•		•		•		•	VI.1-IX.1
<i>H. pahaska</i> (Leussler)													o	VI.3-VII.2
<i>H. viridis</i> (W. H. Edwards)		o				o		o						VI.1-VII.4
<i>H. nevada</i> (Scudder)			o	o	o		o		o	o	o			VI.1-VII.4







[illegible]





[illegible]